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EXAMINER

YANG, JIE

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KURT A. HABECKER and JAMES A. FIFE

Appeal 2009-013118
Application 10/795,968
Technology Center 1700

Decided: March 30, 2010

Before EDWARD C. KIMLIN, CHUNG K. PAK, and PETER F. KRATZ,
Administrative Patent Judges.

KIMLIN, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal from the final rejection of claims 36-58 and 61-65.

Claim 36 is illustrative:

36. Agglomerated niobium powder characterized by a capacitance of at least 65,000 CV/g and a DC leakage of less than 5.0 nA/CV when the agglomerated niobium powder is tested under electrical properties test conditions of sintering at a temperature of 1100° C for 10 minutes and anodizing at a formation voltage of 20V at 60° C.

The Examiner relies upon the following references in the rejection of the appealed claims:

Chang	5,448,447	Sep. 5, 1995
He	6,786,951 B2	Sep. 7, 2004
Reichert	WO 98/37248	Aug. 27, 1998
Reichert	6,193,779 B1	Feb. 27, 2001

Appellants' claimed invention is directed to an agglomerated niobium powder having a capacitance of at least 65,000 CV/g and a DC leakage of less than 5.0 nA/CV. The niobium powder is sintered at a temperature of 1100° C for 10 minutes and anodized at a formation voltage of 20Vf at 60° C. According to Appellants, the high surface area of the niobium powder permits the powder to be formed into a capacitor having a high capacitance (Spec. 3, first para.). The powders preferably have a BET surface area of at least 5.1m²/g (Spec. 4, third para.).

Appealed claims 36-43, 50-56, 58, 61 and 65 stand rejected under 35 § 102(b) as anticipated by Chang, as evidenced by He. Appealed claims 48, 49, 57 and 62-64 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang as evidenced by He. In addition, claims 36-47, 49-

58 and 61-65 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over WO'248 in view of Chang.

We have thoroughly reviewed the respective positions advanced by Appellants and the Examiner. In so doing, we agree with Appellants that the Examiner's rejections are not sustainable.

We consider first the Examiner's §102 rejection over Chang. Chang produces capacitor grade powder of tantalum and teaches that "the chemical and physical properties of tantalum and niobium are known by those skilled in the art to be sufficiently similar to permit substitution of either metal" (Col. 3, ll. 65-69). However, while we agree with the Examiner that Chang fairly teaches the production of capacitor grade niobium powder, the Examiner has not made the requisite factual finding that the reference discloses the production of tantalum or niobium powder that has Appellants' claimed capacitance of at least 65,000 CV/g and a DC leakage of less than 5.0nA/CV. Appellants' Specification and Declaration evidence explains that the claimed capacitance and DC leakage is obtained by using a niobium powder of high surface area, and the Examiner has pointed to no disclosure in Chang that powders of such high surface area are produced by Chang. Indeed, the BET surface areas exemplified by Chang are much smaller than those used by Appellants, e.g., 0.35, 0.34, 0.36, 0.53 and 0.44.

Also, the Examiner dismisses the claim requirement that the recited capacitance and DC leakage values are acquired upon sintering the powder at a temperature at 1100° C for 10 minutes and anodizing the powder at a formation voltage of 20Vf at 60° C. The Examiner states that "these are process limitations in a product claim" (Ans. 19, first para.). However, the Examiner has not established the requisite correspondence between the

processes of Appellants and Chang to support a reasonable conclusion that the powders fairly taught by Chang necessarily have the claimed capacitance and DC leakage. Appellants, on the other hand, have proffered Declaration evidence which demonstrates that niobium powders having a BET surface area as disclosed by Chang would have a capacitance significantly lower than the claim value.

The Examiner's separate § 103 rejection of claims 48, 49, 57 and 62-64 over Chang as evidenced by He is not sustainable because the Examiner has not set forth a rationale for why it would have been obvious for one of ordinary skill in the art to prepare a niobium powder having the claimed capacitance and DC leakage based on the Chang disclosure. The Examiner has not rebutted Appellants' position that He is not prior art, and He provides no evidence that powders produced by the Chang process have the claimed capacitance and DC leakage. Manifestly, the Examiner's citation of He, which is not prior art, for the obviousness of using high surface area niobium powders in the Chang process constitutes reversible error (Ans. 5, first para.).

Turning to the § 103 rejection over WO'248 in view of Chang, Appellants correctly note that WO'248 is exclusively directed to the production of tantalum powders. While Chang teaches that tantalum and niobium have similar physical and chemical properties, the Examiner has not established that it would have been obvious for one of ordinary skill in the art to use the low surface area powders of Chang in the particular process of WO'248 to prepare an agglomerated niobium powder having the presently claimed capacitance and DC leakage.

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In conclusion, based on the foregoing, we are constrained to reverse the Examiner's rejections.

REVERSED

tc

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